



*JB*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No.: UCF-306RCE  
Application Serial No.: 10/082,658  
Filed: 10/19/2001  
First Named Inventor: Martin Richardson  
Examiner: Thomas, Courtney D.  
Group: 2882  
For: EUV, XUV, AND X-RAY WAVELENGTH SOURCES CREATED FROM LASER PLASMA  
PRODUCED FROM LIQUID METAL SOLUTIONS, AND NANO-SIZE PARTICLES IN SOLUTIONS

INFORMATION DISCLOSURE STATEMENT

Honorable Commissioner of Patents  
and Trademarks  
Washington DC 20231


Sir:

Pursuant to 37 CFR §§ 1.97 and 1.98, record is being made below in a form PTO-1449 of documents which the Patent Office may wish to consider in connection with examination of the above-identified patent application. It is respectfully requested that the cited documents be carefully considered by the Examiner and made of record in this case. As provided in § 1.97(g), no representation is made or intended that a thorough art search was made. As provided in 37 C.F.R. § 1.97(h), this Supplemental Information Disclosure Statement does not constitute an admission of any kind, and specifically is not an admission that the documents listed on the attached PCT-1449 are, or are considered to be, material to the patentability of the above-identified patent application, as defined in 37 C.F.R. § 1.56(b).

Copies of the cited references were previously submitted to the USPTO in the parent application No.: 10/082,658 filed: 10/19/2001 and placed in the file. Applicants claim priority to said application under 35 U. S. C. §120. Accordingly, copies of those documents are not provided with this Statement pursuant to 37 CFR § 1.98(d).

It is respectfully requested that the cited documents be carefully considered by the Examiner and made of record in the case.

Respectfully submitted,

---

Brian S. Steinberger  
Law Offices of Brian S. Steinberger  
Registered Patent Attorneys  
PTO Registration No. 36,423  
101 Brevard Avenue  
Cocoa, Florida  
(321) 633-5080/(321) 633-9322 Fax  
Customer No.: 23717

Date: 10/2/03



US DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

APPLICANT: MARTIN RICHARDSON  
FOR: EUV, XUV, AND X-RAY WAVELENGTH SOURCES CREATED FROM LASER PLASMA  
PRODUCED FROM LIQUID METAL SOLUTIONS, AND NANO-SIZE PARTICLES IN SOLUTIONS

LIST OF ART CITED BY APPLICANT

U.S. PATENT DOCUMENTS

EXAMINER	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
AA	4,024,400	05/17/77	Blytas et al.	250	432	05/13/76
AB	4,328,464	05/04/82	Pivrotto	330	4.3	02/07/80
AC	4,700,371	10/13/87	Forsyth et al.	378	34	11/08/84
AD	4,723,262	02/02/88	Noda et al.	378	119	12/26/85
AE	4,866,517	09/12/89	Mochizuke et al.	378	119	09/10/87
AF	4,953,191	08/28/90	Smither et al.	378	143	07/24/89
AG	5,052,034	09/24/91	Schuster	378	121	10/29/90
AH	5,126,755	06/30/92	Sharpe et al.	346	75	03/26/91
AI	5,142,297	08/25/92	Eijkman et al.	346	1.1	03/26/90
AJ	5,148,462	09/15/92	Spitsyn et al.	378	143	04/08/91
AK	5,151,928	09/29/92	Hirose	378	119	08/20/91
AL	5,243,638	09/07/93	Wang et al.	378	119	03/10/92
AM	5,257,303	10/26/93	Das Gupta	378	85	08/03/92
AN	5,317,574	05/31/94	Wang	372	5	12/31/92
AO	5,459,771	10/17/95	Richardson et al.	378	119	04/01/94
AP	5,577,091	11/19/96	Richardson et al.	378	119	01/13/95
AQ	5,577,092	11/19/96	Kublak et al.	378	119	11/19/96
AR	5,991,360	11/23/99	Matsui et al.	378	119	02/03/98
AS	6,002,744	12/14/99	Hertz et al.	378	119	10/21/98
AT	6,069,937	05/30/00	Oshino	378	119	7/17/98
AU	6,185,277	02/06/01	Harding	378	143	05/07/99
AV	6,180,952	01/30/01	Haas et al.	250	492.2	04/03/98
AW	6,244,717	06/12/01	Dinger	359	859	05/28/99

US DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

APPLICANT: MARTIN RICHARDSON

FOR: EUV, XUV, AND X-RAY WAVELENGTH SOURCES CREATED FROM LASER PLASMA  
PRODUCED FROM LIQUID METAL SOLUTIONS, AND NANO-SIZE PARTICLES IN SOLUTIONS  
LIST OF ART CITED BY APPLICANT

## FOREIGN PATENT DOCUMENTS

FA	JA57/41167	1982	
FB	JA0267395	11/90	Iwamatsu

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

OA T.P. Donaldson, *SOFT X-RAY SPECTROSCOPY OF LASER-PRODUCED PLASMAS WITH A CONVEX MICA CRYSTAL SPECTROMETER*, X-Ray Astronomy Group, Vol. 9, P. 1645-1655, 1 March 1976

OB T. Mochizuki, *SOFT X-RAY OPTICS AND TECHNOLOGY*, Proceedings Of SPIE-The International Society For Optical Engineering, Vol. 733, P. 23-27, December 1986

OC Martin Richardson, *LASER PLASMA SOURCE FOR X-RAY PROJECTION LITHOGRAPHY*, Laser-Induced Damage In Optical Materials, Vol. 1848, P. 483-500, 1992

OD W.T. Silfvast, *LASER-PRODUCED PLASMAS FOR X-RAY PROJECTION LITHOGRAPHY*, American Vacuum Society, P. 3126-3133, 4 August 1992

OE F. Jin, *MASS LIMITED PLASMA CYROGENIC TARGET FOR 13NM POINT X-RAY SOURCES FOR LITHOGRAPHY*, Application of Laser Plasma Radiation, Vol. 2015, P. 1-9, August 1993



## SUPPLEMENTAL FORM PTO-1449

Attorney Docket No.: UCF-306RCE

Application Serial No.: 10/082,658

Filed: 10/19/2001

First Named Inventor: Martin Richardson

Examiner: Thomas, Courtney D.

Group: 2882

For: EUV, XUV, AND X-RAY WAVELENGTH SOURCES CREATED FROM LASER PLASMA PRODUCED FROM LIQUID METAL SOLUTIONS, AND NANO-SIZE PARTICLES IN SOLUTIONS

US DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

## LIST OF ART CITED BY APPLICANT

## U.S. PATENT DOCUMENTS

EXAMINER	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
AA	4,182,574	01/1980	QUILLFELDT	356/318	
AB	6,285,743	09/2001	KANDAKA		
AC	6,304,630	10/2001	BISSCHOPS	378/119	
AD	6,493,423	12/2002	BISSCHOPS	378/119	

## PUBLICATION DOCUMENTS

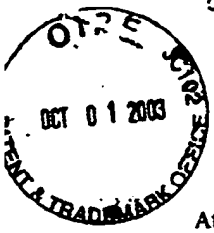
PA	US2003/0108155A1	06/2001	ELKINS	378/119
PB	US2002/0015473A1	02/2002	HERTZ	378/143
PC	US2002/0044629A1	02/2002	HERTZ	378/119
PD	US2002/0090054A1	07/2002	SOGARD	378/119

## FOREIGN PATENT DOCUMENTS

NONE

## OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

OA HERTZ, H. M., et al., Debris-free Soft X-ray Generation Using a Liquid Droplet Laser-Plasma Target, Department of Physics, Lund Institute of Technology, Sweden, *SPIE* Vol. 2523, pp 88-93OB RYMELL, L., et al., Droplet Target for Low-Debris Laser-Plasma Soft X-ray Generation, No. ½, pp. 105 - 110, *Optics Communications*, November 1993



70-0200

RCE/2800

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No.: UCF-306RCE  
Application Serial N : 10/082,658  
Filed: 10/19/2001  
First Named Inventor: Martin Richardson  
Examiner: Thomas, Courtney D.  
Group: 2882  
For: EUV, XUV, AND X-RAY WAVELENGTH SOURCES CREATED FROM LASER PLASMA  
PRODUCED FROM LIQUID METAL SOLUTIONS, AND NANO-SIZE PARTICLES IN SOLUTIONS

Commissioner of Patents and Trademarks  
Patent and Trademark Office  
Mail Stop RCE  
P O Box 1450  
Alexandria, VA 22313-1450

Honorable Commissioner:

I enclose the following:

1. REQUEST FOR CONTINUED EXAMINATION and attachments;
2. Petition Requesting Consideration of Information Disclosure Statement;
3. Supplemental Form PTO-1449;
4. Check in the amount of \$565.00.  
( \$180.00 is attached under 37 CFR 1.17(p))  
( \$385.00 RCE filing fee)

Applicant respectfully request that you enter the attached of record in the above referenced utility patent application.

Respectfully submitted,

Brian S. Steinberger  
Law Offices of Brian S. Steinberger  
Registered Patent Attorneys  
PTO Registration No. 36,423  
101 Brevard Avenue  
Cocoa, Florida  
(321) 633-5080/(321) 633-9322 Fax  
Customer No.: 23717

I certify that this correspondence, including the attachments listed, is being deposited with the United States Postal Service, Express Mail Post Office to Addressee service, receipt No. EV326224600US, in an envelope addressed to Assistant Commissioner for Patents, Mail Stop RCE,, P O Box 1450, Alexandria, VA 22313-1450, on the date shown below.  
10/11/03  
Date of Mailing      Signature of Person Mailing